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ABSTRACT

The basic procedure in the evaluation of educational projects is described: clarification of project components and objectives; identification of information needs; assignment of priority rankings to objectives; allocation of resources, including personnel, money, and time; identification of data to be collected; construction of the evaluation design; data collection; data analysis; and dissemination of results. Utilization and implementation of results for program revisions are based on the evaluation study. Ten hints on hiring an evaluation consultant are offered. (MH)

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EDUCATIONAL MANAGER'S GUIDE TO PROJECT EVALUATION

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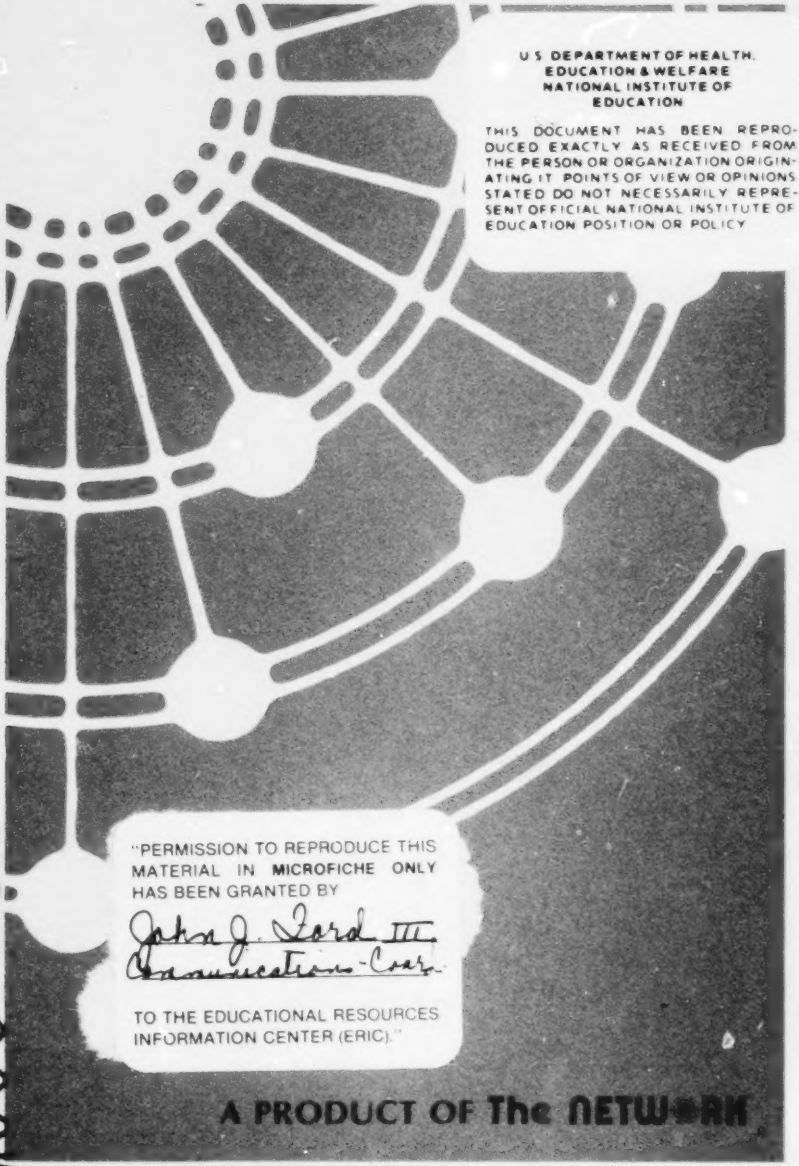

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EDUCATIONAL MANAGER'S GUIDE TO PROJECT EVALUATION

By

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OVERVIEW OF PROJECT EVALUATION

Few areas of educational program activity are as maligned, misunderstood, and ignored as evalutaion. But because educators must continually make judgments about the appropriateness, progress, and impact of their work, evaluation-like activity permeates the total program. Evaluation is essentially an information gathering process, intended to contribute to decision making. It is typically focused on two major objectives:

FORMATIVE EVALUATION (PROCESS)

Formative evaluation is creating information useful to project decision-makers in monitoring and revising the program. Such revisions might include changing the delivery system, using different materials, altering the staffing pattern, extending the service hours, or redesigning the teacher training program. This objective refers to the ongoing assessment of the project. Formative evaluation is also referred to as *process* evaluation.

SUMMATIVE EVALUATION (PRODUCT)

Summative evaluation is creating information about the project which ensures accountability to various constituency groups. The relevant constituencies for a particular project would include all groups which have a stake in the project, for example, funding agencies, clients, advisory board, host institutions, community. This objective refers to the assessment of outcomes of the project. Summative evaluation is also referred to as *product* evaluation.

Evaluation methodology and its related tools simply represent a means of proposing and answering questions related to these objectives in a systematic, objective manner.

In federally funded projects, evaluation is generally part of the scope of work identified in the funding proposal. Few projects, however, have in their proposal a detailed evaluation outline; fewer still have an evaluation plan of action and schedule spelled out when the project gets underway.

The project manager is responsible for making sure that the program evaluation gets done. Since managers are often not evaluators themselves (nor is there any particular reason why they should have such competence), this responsibility can seem ominous. Like other program activities, evaluation depends upon planning and monitoring for its accomplishment and those functions *are* within the domain of the manager. By taking responsibility for planning the evaluation, locating consultants and other resources as needed, and generally overseeing the process, the manager plays a central role in assuring the successful completion of a meaningful evaluation. And a good evaluation process makes running the program easier and more efficient.

THE EVALUATION PROCESS

There are several basic steps generally accepted as foundations for the evaluation of projects in educational settings. Synthesized from many sources, nine of these steps are presented here (within the context of formative and summative purposes) leading to both effective project management and meaningful evaluation. The steps are:

1. Clarifying project components and objectives
2. Identifying information needs
3. Prioritizing evaluation objectives
4. Allocating resources to the evaluation
5. Identifying the data to be collected
6. Constructing the evaluation design
7. Collecting the data
8. Analyzing the data
9. Reporting the results

STEP 1 CLARIFYING PROJECT COMPONENTS AND OBJECTIVES

Educational projects are usually broad in scope and complex in design. The activities undertaken to implement the program are numerous, but they can usually be clustered into categories which can be called *project components*. A rather universal list of these categories of activity — or components — would include: Project Management, Staff Development, Services to Students, Training, Dissemination and Diffusion, and Product Development. Thinking of a project as a series of components makes evaluation *and* planning more manageable.

Often, funding proposals contain a detailed description of project objectives and related activities within each component area. When, however, the proposal contains only global descriptions of planning activity and generally-stated objectives and goals, objectives must be clarified and stated in operational terms to assist the evaluation effort. Simply stated, this step means writing objectives in such a way that they indicate observable activities to be undertaken by project personnel.

For example: "To provide inservice training for professionals and paraprofessionals working with LD students" is too broadly stated to suggest implementation steps. To place this objective in operational terms, the staff would have to clarify the *intention* of this objective (desired outcome or product), and the *means* by which it would be accomplished (process). The result might be the following: "To provide inservice training for professionals and paraprofessionals working with LD students through a three-credit university course, workshop program, and supervision, with the result that 80% of the participating teachers would utilize individualized instruction strategies in the classroom."

This kind of clarification must be done with each of the proposed objectives. The objectives can then be clustered into project components, and you can move on to an examination of information needs.

STEP 2 IDENTIFYING INFORMATION NEEDS

There is always an abundance of information, or data, about a project which can be collected. Unless you identify your evaluation objectives and information needs in advance, you run the risk of wasting effort by either collecting useless information or not collecting that which you need.

Since evaluation is essentially an information gathering process, a crucial question is: *"Who* needs to know *what* about the project?" To answer this question, consider all the constituency groups who will want to know something about the project. They may include funding agencies, host agencies, the Joint Dissemination Review Panel (or JDRP, validation by which is required for third year

funding of Title VI-G projects), replicators, and project managers. Other possible constituency groups for your project might include the community, parents, the state department of education, and the special education profession.

Answering the question, "What do they need to know?" helps you determine what information to collect. One way of answering the question is to *ask* the various constituency groups what information they will want in order to determine whether they will continue their participation or support. By asking, you directly involve members of the constituent groups in the project *and* determine in advance their expectations for the evaluation and their criteria for success.

You might organize this step on a chart such as the one on the following pages. In each appropriate box, place the information needs you discover. (Some examples are provided.) Your chart will have the objectives of your project specified in operational terms within each component area. When Step Two is completed, you will know what you need to know, and you will be ready to plan the evaluation itself.

SAMPLE

INFORMATION NEEDS

		CONSTITUENCY	
		BEH	**HOST AGENCY**
PROJECT COMPONENTS AND OBJECTIVES	**PROJECT MANAGEMENT OBJECTIVES:**	(What did you do? How was it different from the proposal?)	(How can we continue to operate the program when the funding ends?)
	STAFF DEVELOPMENT OBJECTIVES:		
	SERVICES TO STUDENTS OBJECTIVES:	(What were the outcome results?)	(Are the students in the program receiving quality service?)
	TRAINING OBJECTIVES:		
	DISSEMINATION / DIFFUSION OBJECTIVES:	(What do others know about your project?)	
	PRODUCT DEVELOPMENT OBJECTIVES:	(What would an adopter need to replicate the program?)	

IDENTIFICATION CHART

SAMPLE

GROUPS			
JDRP	**REPLICATORS**	**PROJECT MANAGERS**	**OTHER**
	(What new skills would the staff need to implement this program?)	(Does the staff have the competencies they need? Are they improving in weak areas?)	
(What happened to the students? What makes you sure it was your program which caused the changes?)			
(Can others learn to do what you do?)	(Is there a training program developed?)		
(Are the costs reasonable?)	(What are you doing? How does it work? Will it work in my school?)		
		(Do we have an adequate validation plan for products?)	

STEP 3 PRIORITIZING EVALUATION OBJECTIVES

When the Information Needs Identification Chart is complete, you will probably find that you have more questions than you can address within the resources limitations of your project effectively.

You and perhaps members of your staff should make an attempt at this point to prioritize the objectives for the evaluation itself. To do this, you need to consider the various constituency groups and the degree to which it is important or essential to meet their information needs.

When you have assessed available resources for evaluation (Step 4), and created your evaluation design (Step 6), you might reconsider your priorities and make some adjustments. The step of prioritizing the objectives for the evaluation is a means of guarding against trying to do too much — a common pitfall in educational evaluation.

STEP 4 ALLOCATING RESOURCES TO THE EVALUATION

Various resources, both internal and external to the project, will be needed to carry out the evaluation. The list would certainly include *people* — people with evaluation or research expertise as well as those who can carry out the more operational steps, and it would include *financial resources* and *time*.

PEOPLE RESOURCES: The areas of special expertise called for in conducting an evaluation are: 1) evaluation design construction, 2) instrument development and/or administration, 3) data analysis, and 4) report preparation. Many, if not all, of these special skills may be possessed by a single evaluation consultant. Some projects have such a person assigned to the staff, others hire a consultant for a limited number of days to perform specific tasks (a list of consumer tips for engaging an evaluation consultant is included at the end of the packet). In some cases, a graduate student able to perform the statistical analysis of data is all that is necessary to supplement the regular project staff.

Depending on how the evaluation is designed, project staff may have important responsibilities in carrying out the evaluation. Administering data collection instruments, reporting the data, or serving as a subject for some part of the study are possible functions staff can serve. Most important, however, is the role of the project manager. It is the manager who oversees the entire evaluation, keeps it on schedule, allocates needed resources, and manages the other actors in the process.

FINANCIAL RESOURCES: Evaluations cost money. The major expenses are typically for consultants, computer services, and instruments (if tests other than those administered for diagnostic purposes are utilized). A very general guideline for allocating funds to evaluation is between five and eight percent of the total project budget. If funds were not assignable to evaluation in the original budget, it is possible to obtain permission to shift monies from other budget categories. Rarely is additional funding approved for evaluation purposes *during* a fiscal year; continuation proposals can contain requests for modest increases for evaluation purposes. If money can be found in other categories, a letter requesting approval to transfer money must be submitted to the funding agency program officer.

TIME REQUIREMENTS: Time requirements for evaluation activity vary from project to project and from month to month within a project. The project manager must anticipate time requirements and plan for them to be met. Attention to evaluation work can easily be lost in the day-to-day operation of the project; staff may need both support and reminders from time to time.

Note: *Issues within all three categories above are ongoing and call for continual monitoring.*

STEP 5 IDENTIFYING THE DATA TO BE COLLECTED

Meeting the information needs you have identified requires that you gather data which relate to the questions posed and which are compelling to specified constituencies. Surveying teachers' attitudes about the progress of students, for example, is probably not convincing evidence by itself that the desired outcomes are

being achieved. The step of determining data to be collected is a critical one in planning and designing the evaluation, and an evaluation consultant might become involved at this point. A good evaluation consultant can help you construct methods for obtaining the data you need to give you and other constituencies solid evidence of what is happening.

To further explain this step, let us separate formative and summative evaluation. As project manager, you can probably determine the kind of data you and other decision makers need to manage the project. Examples might be the number of students screened, diagnosed, and assigned to services each month; progress on the development of products; contacts made regarding training programs; or expenditures made on materials. Besides these quantitative reports, you'll probably want to know *how well* things are going — what obstacles are people encountering, how effective is the staff, what is and is not working? Both of these kinds of questions pertain to formative evaluation, since the data is collected and analyzed continually and forms the basis for making decisions about the project along the way.

For summative evaluation purposes — determining and reporting the *results* of project activity — you need to be more "scientific." First, you must demonstrate that the proposed objectives were met. Your funding agency will want to be assured that the work you were funded to perform was accomplished, information usually contained in a yearly report. Second, funding for diffusing a project often depends upon validating by either the state's department of education or by the Office of Education/National Institute of Education's Joint Dissemination Review Panel (JDRP). To answer their question about what happened to students as a result of your program, you will need an evaluation design.

The term evaluation design refers to a plan for documenting, analyzing, and reporting the results of your work in a way that allows you and others to have confidence in the conclusions. Claims that the project caused certain changes in students must be supported by evidence proving beyond a reasonable doubt that the changes were a result of the program, rather than of other factors. Such evidence must be obtained under carefully established conditions, the results of which must be subjected to statistical analysis.

There are a number of good resources on evaluation design available. A bibliography available from THE NETWORK contains references to a select few which have been useful for several educational projects.

Whatever design you select, it should be incorporated into the design for the comprehensive project evaluation.

STEP 6 CONSTRUCTING THE EVALUATION DESIGN

A well-constructed design is perhaps the most useful tool a project manager can have. The completed design becomes a monitoring system, a record keeping system and a planning system, as well as a means of obtaining conclusive information about the project and its outcomes.

Essentially, the design contains four sections. The first is the performance objectives section, which contains both process and product objectives. Second is the data collection procedures section, including instruments used and schedule of administration.

Third, the techniques of data analysis are identified. This section refers to both statistical analysis methods and to less scientific techniques for analyzing the information obtained, such as frequency counts and case studies. The fourth section is the reporting plan, containing methods, schedule, and intended audiences for the various reports which will be created from the evaluation. Reporting the results will be addressed in Step Nine.

A format for the evaluation design described above is presented on the following pages.

EVALUATION DESIGN/

PROJECT COMPONENTS	PERFORMANCE OBJECTIVES		DATA COLLECTION PROCEDURES		
	PRODUCT OBJECTIVES	PROCESS OBJECTIVES	SPECIFIC DATA COLLECTED AND INSTRUMENTS USED	DATE(S) OF COMPLETION	PERSON(S) RESPONSIBLE AND PERSON DAYS
PROJECT MANAGEMENT					
STAFF DEVELOPMENT					
SERVICES TO STUDENTS					
TRAINING					
DISSEMINATION /DIFFUSION					
PRODUCT DEVELOPMENT					

PLANNING FORMAT

DATA ANALYSIS			REPORTING OF EVALUATION RESULTS		
DATA ANALSIS TECHNIQUE	DATES	PERSONS RESPONSIBLE	METHOD	SCHEDULE	AUDIENCES

19

STEP 7 COLLECTING THE DATA

With an evaluation design completed, data can be collected. Even if others are responsible for collecting data, it all should come to you. As project manager you are the "first line of defense" against breakdowns in the plan, and your role as monitor of the evaluation makes you responsible for seeing that work is proceeding on schedule.

The methods and instruments designed to collect information for formative evaluation purposes become the documentation system. If carefully created, the documentation system and an accompanting communication system should provide you with timely, relevant information in an efficient and convenient fashion.

Included in the system will be written reports and records prepared by staff, reactions of teachers receiving training, feedback from users of your products, scores on tests administered to students, minutes of staff meetings, and other artifacts of project activity.

Creating an adequate set of reporting and recording devices is a tricky job — one which calls for experimentation and revision. The goal should be a system which peole will use and which will yield accurate, comprehensive information*.

STEP 8 ANALYZING THE DATA

Data analysis is the process by which the data collected is organized and interpreted so that conclusions can be drawn. An assortment of methods will no doubt be required to meet the many purposes of evaluation — e.g., formative evaluation data can be reviewed internally and less formally than can data from which summative conclusions are to be drawn.

A continuum of possible methods of analysis would range from summarizing subjective impressions to conducting highly rigorous

*Since designing a documentation system is a substantial undertaking itself, we do not go into it here. The NETWORK can provide services and resources in this area upon request.

statistical analyses. Determining the analysis method should be done in advance of collecting the data to preserve objectivity. Again, the procedures selected should reflect the needs of the constituency groups to whom the results will be reported.

A project manager unfamiliar with statistics and data analysis should most definitely engage a consultant at this step.

STEP 9 REPORTING THE RESULTS

Reporting often calls to mind written materials delivered impersonally. Consideration should be given, however, to various methods of conveying the results of your evaluation to the several audiences interested. Not all constituency groups will be interested in all of the results. The impact of the results depends in part on how they are presented. And confidentiality is an important factor to be addressed. For these reasons and others, reporting should be as tailored to the individual or group as was the identification of information needs.

This is not to suggest that results be distorted or misrepresented in any way. An example makes the point: If project staff are surveyed and tested to determine their level of competence in project-related skill areas in order to plan a staff development program, the staff should have the assurance that the results will not be revealed to the district superintendent or parents. It may, however, be appropriate to report the results in an anonymous fashion, that is, without revealing individual's ratings. Likewise, a third-party evaluator engaged to closely observe the project and report impressions and recommendations to the staff for the purpose of reconsidering programmatic approaches would be inclined to be less than wholly candid if his or her report were being generally circulated to all constituency groups.

Consideration should also be given to using the evaluation results to increase the impact of the project. Well targeted reporting serves the purpose of highlighting specific results so that the target audience is not bogged down by information irrrelevent to them. The special education profession, for example, would be affected by the finding that an innovative delivery system achieved dramatic

results with learning disabled adolescents. Learning that the project's objectives had been met precisely on schedule would probably not be of significant interest to them.

A series of reports, then, designed for multiple audiences, seems to be the most effective means of conveying th results of the evaluation. For some constituency groups, an interactive process might be employed — oral presentation with audience reaction solicited — while in other cases a highly specific written report might be the most effective. Though preparing the reports is one of the final steps in the evaluation process, the nature and method of reporting should be determined early in the evaluation process and should, if possible, involve the constituency groups themselves in the determination.

AFTER EVALUATION

When reports are completed and submitted, the evaluation is finished. But an important phase remains — that of utilizing the evaluation results to make decisions about the project. In this sense, evaluation is a means to an end, not the end itself. The results obtained become the basis on which programmatic revisions are made and new work is planned, which then is evaluated.

Because formative evaluation is ongoing, results will be continually reviewed and utilized in decision making. Summative evaluation results, however, reflecting broader scope and more objective, analytical scrutiny, call for thoughtful consideration of the entire project.

In addition to being a process, evaluation is a perspective, a mind-set of looking at program activity in an analytical fashion. It assumes the values of informed decision making and commitment to quality and improvement.

TEN TIPS FOR CONSUMERS OF EVALUATION CONSULTANT SERVICES

1. Solicit recommendations for evaluation consultants from other consumers — project directors, school district administrators, state department of education personnel, NaLDAP's Human Resource File.

2. Find an *educational* evaluator, not simply a person with strong statistical or computer background. The consultant should have experience in evaluating educational projects (both process and product evaluation) and be familiar with design constraints and alternatives.

3. When you have identified candidates, ask them for names of other clients they have served. It's wise to talk with a few others who have worked with the consultant to learn about his or her style, expertise, and ability to work within a schedule.

4. Choose a consultant easily accessible to the project. A consultant who is geographically close to the project site can be available for meetings, on-site data collection and reporting, and other aspects of the formative evaluation process. Also, keeping travel costs down helps to make the evaluation cost effective.

5. Determine the cost of evaluation in advance, based on what is budgeted or what can be transferred to an evaluation line item. A good rule of thumb established the cost of evaluation between three and eight percent of the total project budget.

6. Negotiate with the consultant for frequent on-site visits to discuss procedures, interim results, and problems which arise.

7. Contract carefully with the consultant. When formulating a contract with an outside evaluation consultant, the following things should be considered: a) who has title to the data — make certain that the project, not the evaluator, has that title; b) the exact terms of the evaluation — what is expected of whom, when; c) the number of days on-site; d) the itemized budget for the evaluation; and e) a cancellation clause allowing 30-day

notice for cancellation of the contract for both the project and the evaluator. The contract should be in writing, signed by both client and consultant.

8. Be sure the consultant is introduced to and accepted by key Individuals involved in the evaluation. If the consultant meets resistance in obtaining data, the evaluation will be weakened.

9. Consider having the consultant conduct inservice sessions for project staff and teachers to acquaint them with the purposes procedures of evaluation. Be sure staff understand the way in which the results of the evaluation will be used.

10. Establish the evaluation design as a cooperative effort involving the project director, the project staff, and the evaluator. This involvement will increase the usefulness of the study and results. Take into account reality factors and limitations, and insure that the consultant's interests and orientation don's overly influence the design.

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The NETWORK also contracts with local school districts and other educational agencies to provide assisstance in such areas as staff development, evaluation, management skills, career education, and the development of individualized educational programs (IEPs) for special needs students.